Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Parts 1, 21 and 74 to Enable	)	
Multipoint Distribution Service and	)	MM Docket 97-217
Instructional Television Fixed Service	)	
Licensees to Engage in Fixed	)	
Two-Way Transmissions	)	
	)	
	)	

REPORT AND ORDER ON FURTHER RECONSIDERATION
AND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: July 6, 2000 **Released:** July 21, 2000

Comment Date: August 21, 2000
Reply Comment Date: August 31, 2000

By the Commission:

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I. INTRODUCTION AND SUMMARY

1. In our order in *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd 19112 (1998)("*Two-Way Order*"), we amended Parts 21 and 74 of our rules to provide licensees in the Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") with substantially increased operational and technical flexibility. Specifically, the rule changes were designed to allow these licensees, which had formerly provided primarily one-way video services, to provide a wide range of high-speed, two-way services to a variety of users. On July 29, 1999, we released our *Report and Order on Reconsideration*[1] in this proceeding, which expanded on some of the rules we adopted in the *Two-Way Order* and clarified others. In this order on further reconsideration, we make additional modifications and clarifications to others in order to facilitate further the provision of these services to the public.

II. BACKGROUND

2. The MDS service has traditionally functioned as a one-way point-to-multipoint video transmission service that is often referred to as "wireless cable."[2] ITFS licensees ordinarily have used their frequencies for one-way transmission of educational and instructional material to students.[3] MDS utilizes two channels in the 2150 to 2160 MHz band and the two services share spectrum in the 2500 to 2686 MHz band. In the latter band, ITFS licensees are allotted five groups of 6 MHz channels and MDS licensees are allotted 3 groups of 6 MHz channels.

3. The Commission's rules permit ITFS licensees to lease channel capacity on their licensed spectrum which they are not using to MDS operators, subject to certain technical limitations and programming requirements. The revenue from these leases subsidizes the educational mission of the ITFS licensees. This mutually beneficial relationship has resulted in a history of cooperation between MDS operators and ITFS licensees, with MDS operators providing the funds used by ITFS licensees for their educational mission and ITFS licensees providing the extra channel capacity needed by MDS operators to make their systems viable. In light of this history of cooperation, the Commission adopted an aggressively flexible deregulatory approach to both services, premised on cooperation between all the parties involved rather than on regular Commission intervention in possible disputes, especially in regard to interference issues.

4. The proceeding which resulted in the *Two-Way Order* was commenced in response to a petition for rulemaking filed by a group of over one hundred participants in the wireless cable industry, including wireless cable system operators, MDS and ITFS licensees, equipment manufacturers and consultants, who requested that the Commission amend its rules to facilitate the provision of two-way

[1] 14 FCC Rcd 12764 (1999) ("*Reconsideration Order*").

[2] 47 C.F.R. § 21.903.

[3] 47 C.F.R. § 74.932.

communication services by MDS and ITFS licensees.[4] Virtually all of the comments received in response to that petition, as well as virtually all of the comments received in response to the *NPRM* that we subsequently released, strongly supported amending our Rules to enhance the ability of licensees to provide two-way service. Although there were some disagreements on the specifics of how to proceed in a two-way digital environment, support for the basic two-way concept was close to unanimous.

5. Following the release of the *Two-Way Order*, we received petitions for reconsideration which focused primarily on requests that we expand our new streamlined processing system to cover all ITFS modifications; formalize an interference complaint process; modify some rules regarding ITFS leased capacity and make certain technical clarifications to our rules. We ruled on those requests in the *Reconsideration Order*. In response to that decision, we have received further petitions for reconsideration, which ask that we: (1) permit certain lease provisions; (2) review the treatment of boosters stations and receive sites; and (3) further refine our technical rules.[5] We address each of these issues in turn.

III. DISCUSSION

A. Lease Assignments

6. In both the *Two-Way Order* and the *Reconsideration Order*, we determined to leave in place the existing ban on excess-capacity lease terms that would require assumption of the lease obligations by any assignee or transferee.[6] BellSouth has again asked us to reconsider this position, while the Catholic Television Network ("CTN") and other ITFS parties argue that the ban should remain in place.

7. In our previous decisions, we held that lease provisions that required the assignment of lease obligations to an ITFS transferee would place an unreasonable impediment on the assignment or transfer of the ITFS facility and inhibit the ITFS licensee's flexibility in finding a buyer.[7] BellSouth contends that our earlier decisions actually operate to the detriment of ITFS. BellSouth states that MDS operators who spend millions of dollars to construct transmission facilities face a serious risk of losing capacity on their

[4] Petitioners filed their Petition for Rulemaking on March 14, 1997 and it was placed on Public Notice March 31, 1997. *Pleading Cycle Established for Comments on Petition for Rulemaking to Amend Parts 21 and 74 of the Commission's Rules to Enhance the Ability of Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, Public Notice RM-9060, DA 97-637 (rel. March 31, 1997). We considered the comments and reply comments filed in response to the March 31 Public Notice in formulating the proposals in *the Notice of Proposed Rulemaking in the Matter of Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 12 FCC Rcd 22,174 (1997) ("*NPRM*"). On June 12, 1998, we released a Public Notice requesting comment on several ex parte presentations made subsequent to the release of the NPRM under our "permit-but-disclose" ex parte rules. See 47 C.F.R. § 1.1206. Those comments were due by July 2, 1998. See *Establishment of Period to Comment on Ex Parte Presentations, Public Notice*, 13 FCC Rcd 16,584 (1998). We adopted the *Two-Way Order* on September 17, 1998. As noted above, we adopted the *Reconsideration Order* on July 29, 1999.

[5] A complete list of parties who filed petitions for reconsideration, comments and/or replies is attached as Exhibit A.

[6] *Two-Way Order*, 13 FCC Rcd at 19115; *Reconsideration Order*, 14 FCC Rcd at 12792.

[7] *Id.*

systems without any means of replacement if ITFS licensees can assign their licenses without requiring the assignee to honor the lease commitment. As a result, MDS operators will limit the amounts they are willing to pay to ITFS operators for excess capacity, reducing the overall benefits ITFS operators derive from the lease. BellSouth further argues that an ITFS operator is always free to reject such terms if it wishes.

8. In response to BellSouth, CTN argues that an ITFS licensee that wants to assign its lease should not be forced to find a successor willing to be bound by the excess capacity lease. Furthermore, CTN contends that each educational entity that either holds an ITFS license or could be the transferee of an ITFS license has a unique educational mission. CTN states that these differing missions will require different uses of the allotted spectrum and the assignee should not be bound by limits on service imposed by the prior licensee. The Instructional Telecommunications Foundation, Inc. ("ITF") concedes that the restriction on assignment probably does diminish the commercial value of ITFS spectrum, but that this is appropriate because the purpose of the spectrum is to provide instruction, not to secure a financial return.

9. We do not believe that there is any contradiction between an ITFS licensee performing its educational mission and that same licensee securing financial returns from the lease of its excess capacity. In fact, those financial returns can and do provide substantial resources to the ITFS licensee in the performance of its educational mission. We agree with BellSouth and ITF that the prohibition of an assignment provision probably would diminish the financial return on the lease to the incumbent ITFS licensee. While the prohibition does guarantee ITFS licensees more flexibility in the future assignment of their licenses, it restricts them in current negotiations. Based on the arguments presented in the petitions and the comments, we believe that the probable loss to ITFS licensees unable to freely negotiate an existing lease outweighs the potential effect on some hypothetical future transfer. Therefore, we will permit ITFS licensees to agree to clauses in excess capacity leases that would require that the lease be assigned if the underlying license is assigned.

10. We agree with CTN and ITF that the purpose of ITFS spectrum is to provide educational instruction. However, we believe that current ITFS licensees are striving to fulfill that mission and that they should be permitted to obtain the maximum return from their licensed spectrum to further that mission. Although permitting lease conditions that require assignment could restrict some future hypothetical transferee's actions, not permitting that type of condition restricts existing licensees ability to negotiate. We will not encumber those existing licensees and override their judgment in lease negotiations in favor of the interests of transferees that may never exist. We do emphasize that no ITFS licensee is required to accept an assignment clause and any licensee is free to reject such a clause in its lease.

B. Lease Renewals

11. The Petitioners have asked us to reconsider our decision not to grandfather ITFS leases entered into prior to March 31, 1997 that contain automatic renewal provisions effective after March 31, 1997.[8] In the *Reconsideration Order*, we did not grant this relief because we were concerned that this could permit leases that would avoid compliance with the new rules into perpetuity.[9] Petitioners now argue that the class of leases for which they were seeking grandfathering could only have a total term of ten years. Because these leases cannot be continued without end, we will grant the requested relief. Therefore, ITFS excess capacity leases entered into prior to March 31, 1997 which contain a provision for automatic renewal

[8] *Two-Way Order*, 13 FCC Rcd at 19181.

[9] *Reconsideration Order*, 14 FCC Rcd at 12791.

which would be effective after March 31, 1997 are grandfathered provided that the total term for such a lease does not exceed fifteen years. Although the Petitioners only referred to leases with a total term of ten years in the petition for reconsideration, we will also grandfather any leases entered into during the relevant time that contained both an automatic renewal provision and the automatic five-year extension period we previously grandfathered.

C. Booster Station Licenses

12. In the *Reconsideration Order*, we authorized ITFS excess capacity lessees to hold booster station licenses[10] on their leased frequencies subject to written approval by the ITFS licensee.[11] We also required that the relevant lease contain a provision that the lessee must offer to assign the license to the ITFS licensee for purely nominal consideration at the end of the lease term.[12] CTN, the Archdiocese of Los Angeles, ITF and the National ITFS Association ("NIA") argue that this amounts to reallocation of the spectrum and urge us to reconsider this point. BellSouth asks us to clarify that a party leasing capacity from an MDS licensee also is permitted to hold a booster station license on those frequencies subject to the same terms.

13. CTN argues that ITFS spectrum is designated for instructional use by educational entities and reserved for licensing only to such entities for service related to their instructional purpose. CTN states that even though these entities may lease their excess capacity, they do not have the authority to reallocate their spectrum for purely commercial services. CTN also argues that allowing non-ITFS entities to be licensed on ITFS frequencies would apparently eliminate the requirement for instructional use in a booster service area.

14. In order to allay the concerns expressed by CTN and other ITFS licensees, BellSouth proposes that we make the assignment of the booster station license to the ITFS licensee automatic at the end of the lease term. BellSouth also suggests that we require the booster station licensee to meet the instructional programming requirements for booster stations.

15. We will deny the request by CTN and others to reverse our decision to allow the lessees of ITFS excess capacity to hold booster station licenses on the leased spectrum. However, we will adopt modifications to the rule similar to those suggested by BellSouth. We will modify our rules to state that lessees of ITFS excess capacity, who hold booster station licenses on that leased capacity, must either assign the booster station license to the underlying ITFS licensee or, if the ITFS licensee does not want the booster station license, turn the license into the Commission at the end of the lease term. Furthermore, the lessee must meet the educational set aside requirement that would be required if the ITFS licensee held the booster license in its own name. We will modify our rules to reflect these changes.

16. We believe it is reasonable to also permit lessees of MDS capacity to hold booster station licenses on their leased channels. In this case, there would be no educational programming requirement, but we will still require the lessee to either assign the booster license to the underlying MDS licensee or turn it into the Commission if the MDS licensee does not wish to receive the license at the end of the lease

[10] Booster stations are intended to augment service as part of a distributed transmission system where signal booster stations retransmit the signals of one or more MDS stations and/or originate transmissions on MDS channels. 47 C.F.R. § 21.2.

[11] *Reconsideration Order*, 14 FCC Rcd at 12794.

[12] *Id.*

term.

17. In a related matter, the Petitioners have requested that we exempt ITFS booster stations operating within their protected service area ("PSA")[13], but in areas where the licensee has no educational mission, from the minimum programming rules, but not from the reservation and recapture rules.[14] Otherwise, the Petitioners argue that the affected spectrum would lie fallow because a party would be precluded from using it unless and until the ITFS licensee determined that it had an educational mission in that area. CTN argues that this would result in reallocation of the spectrum for purely commercial use. We agree with the Petitioners.

18. The situation at issue would arise when a party already has leased a channel from an ITFS licensee, but that ITFS licensee does not yet need to provide educational service to its entire PSA. In parts of the PSA of such an ITFS licensee there would be no ITFS receive sites, leaving portions of the licensed spectrum unused, unless the lessee is able to utilize them to transmit to its own receive sites. This could result in potentially substantial portions of spectrum lying permanently fallow. Therefore, we will permit a lessee of an ITFS channel to construct and operate a station on the leased frequency, even if the ITFS licensee has no need to utilize a station in that part of its PSA at the time of construction. However, the lessee must at all times set aside capacity on the channel in accord with the reservation and recapture rules. In no event, will we waive the reservation and recapture rules. To do so would preclude the educational use of the spectrum in the affected area and could result in the *de facto* reallocation that concerns CTN.

19. The Petitioners have made an unopposed request that we defer booster service area protection for low powered boosters until after the initial filing window established in the *Two-Way Order*.[15] Because low-powered boosters are often cross-polarized relative to their main transmitter in order to minimize intra-system co-channel interference, and main antennas of neighboring systems are cross-polarized relative to each other in order to minimize inter-system interference, the result is that a low-power booster is often co-polarized to a neighboring system. This makes interference protection and system design particularly difficult and provides an unwarranted preference to these low-powered boosters. Therefore, we will grant the Petitioners request. We note that these boosters will not be left completely unprotected because they will benefit from the protection accorded their PSA or Basic Trading Area ("BTA").

D. Treatment of Receive Sites

20. In the *Two-Way Order*, we granted a PSA to every ITFS licensee and granted individual protection to all receive sites registered through the date of adoption of the *Two-Way Order*.[16] In the *Reconsideration Order*, we stated that the ITFS licensee's PSA is a 35 mile circle centered either on the fixed reference point of the associated wireless cable system, or on the authorized ITFS main station transmitter site, as elected by the ITFS licensee.[17]

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[13] *See* 47 C.F.R. §74.903(d). ITFS licensees have a PSA that extends in a 35 miles radius from the licensees' registered receive sites. *See* ¶ 20 *infra.*

[14] *See*, *Two-Way Order*, 13 FCC Rcd 19152.

[15] *Two-Way Order*, 13 FCC Rcd at 19150.

[16] *Two-Way Order*, 13 FCC Rcd at 19,173; 47 C.F.R. § 74.903(d).

[17] *See Reconsideration Order* 14 FCC Rcd at 12774, n. 37.

21. In its filings, BellSouth asks that we exclude limited, point-to-point ITFS stations from the category of stations granted a 35-mile PSA and to clarify that licensees of "secondary" ITFS facilities are not entitled to an automatic 35-mile PSA.[18] We will deny BellSouth's request on the first point and grant it on the second.

22. BellSouth claims that "[f]or the small percentage of ITFS stations that operate point-to-point, PSA protection is totally irrelevant to their institutional needs, results in overprotection and causes unintended adverse consequences." BellSouth contends that these burdens include the difficulty of designing a system that "needlessly and artificially" protects point-to-point stations.

23. NIA opposes BellSouth's petition, although it does agree that not all point-to-point stations should receive protected status. NIA states that the distinction should be between primary and secondary stations. Secondary stations are usually studio to transmitter links ("STL") and, as such, have not traditionally been given protection relative to primary stations.

24. We agree with BellSouth and NIA that point-to-point ITFS stations authorized on a secondary basis should not receive PSA protection. These stations, which operate mostly as STLs, have traditionally been subordinate to primary stations and we see no reason to change that arrangement. We do not agree with BellSouth, however, that all point-to-point stations should lose PSA protection. Licensees of primary ITFS point-to-point stations are making use of their allotted spectrum, not letting it lie fallow. Although their educational needs at this time only necessitate the use of point-to-point transmissions, those needs could easily change as the licensees exploit the benefits of two-way systems. Under BellSouth's approach, the point-to-point licensees, who currently are operating on their frequencies, would be in the same position as a brand new entrant if they should decide later to use two-way technology. This is an unfair burden to place on these licensees and could effectively preclude their future use of two-way on their own licensed channels. Furthermore, BellSouth concedes that there are only "a small percentage of ITFS stations that operate point-to-point." Therefore, the overall burden on parties that have to protect these stations would be minor compared to the permanent damage done to these ITFS licensees who may never be able to take advantage of two-way operation on their channels.

25. CTN asks that we "clarify" our rules and state that ITFS receive sites outside the 35-mile PSA can request a waiver and be treated as registered as of September 17, 1998. We decline to adopt this clarification. As we made clear in the *Reconsideration Order*, providing this kind of protection outside of the 35-mile radius:

> [I]s inconsistent with the plain meaning of the rule. Limiting protection to a 35 mile radius provides certainty to co-channel and adjacent channel entities, especially now that booster stations can originate signals.[19]

This certainty is essential to the successful deployment of two-way systems. Under CTN's clarification, we would be allowing an ITFS licensee to establish a receive site outside of its 35-mile PSA at any time and then expect all existing stations and subsequently filed stations to protect it as though that new station had been in existence since September 17, 1998. Therefore, an ITFS licensee could undermine any existing system at any time by the establishment of such a station, leaving the affected system in chaos. ITFS licensees operating outside of their PSA are like any other qualified applicant and will have their sites

[18] Stations operating on a primary basis are not required to give protection to those stations operating on a secondary basis.

[19] *Reconsideration Order* 14 FCC Rcd at 12774.

protected only against subsequently filed applications.

26. CTN also asks that we clarify that an ITFS receive site that is registered does not lose that status even if it engages in substantial technical modifications, such as channel swapping. We agree with CTN's requested clarification. To do otherwise could discourage licensees from making modifications to their sites that would improve service to the public. In response to requests from several petitioners, we also affirm that licensees may participate in channel shifting and channel swapping whether their operations are digital or analog. There is no reason to limit the flexibility provided by channel shifting and swapping to digital systems. Furthermore, some systems may be partially analog and partially digital and permitting channel shifting and swapping will help parties in those systems to make the most efficient use of their licensed spectrum.

27. On the issue of channel shifting and channel swapping, the Petitioners ask that we permit these activities without regard to whether the affected licensees are part of "the same system." We agree with the Petitioners that these activities should not be limited to licensees in the same system and should be allowed in any situation where they will facilitate the most efficient use of the spectrum.

E. Interference Resolution

28. CTN asks us to clarify that all ITFS and MDS licensees are obligated to help identify sources of harmful interference in connection with resolving complaints of interference. We believe our rules are self-evident on this point, but we will once again emphasize that cooperation is essential to identify the source of interference and to attempt to resolve any interference issues once the source has been located. The entire two-way regulatory system is premised on such cooperation.

F. Technical Issues

29. IPWireless requests that we conform the out-of-band emission limitations for MDS and ITFS low power response stations (*i.e.*, response stations with an EIRP not exceeding –6 dBW) employing digital modulation to those adopted for certain fixed and mobile wireless stations in other frequency bands. Specifically, IPWireless requests the following requirements be applied to such stations:

> a) At the edge of a 6 MHz channel, out-of-band power shall be attenuated by 25 dB relative to the power (P) within the 6 MHz channel; and
> b) Attenuated along a linear slope to at least 40 dB or 33+10log(P) dB, whichever is the lesser attenuation, at 250 kHz beyond the nearest channel edge; and
> c) Attenuated along a linear slope from that level to at least 60 dB or 43+10log(P) dB, whichever is the lesser attenuation, at all other frequencies removed from the channel.

30. Out-of-band emission limitations for MDS and ITFS response stations employing digital modulation were originally adopted in the *Two-Way Order* and they apply uniformly to those stations irrespective of their EIRP.[20] Those limitations and the new limitations proposed by IPWireless expressly for low power response stations are identical, with the exception that IPWireless adds the terms "33+10log(P) dB" and "43+10log(P) dB" as alternative limitations to the current 40 dB and 60 dB limitations, respectively. ("P" is the Response station power output in watts within the 6 MHz channel, as measured in accordance with the provisions of Rule Section 21.908(e)) IPWireless argues that these

[20] *Two-Way Order*, 13 FCC Rcd at 19136.

alternatives are needed because the existing limitations place unreasonably harsh controls on the amount of out-of-band power being radiated by transmitters which are already, by virtue of operating at –6 dBW or less, emitting very low levels of out-of-band power. For example, the current 60 dB limitation requires that a response station transmitter operating at 0 dBW (1 watt) power output in a 6 MHz channel attenuate its out-of-band power to –77 dBW (as measured in a 100 kHz resolution bandwidth), as compared to a response station transmitter operating at –20 dBW (10 milliwatts) power output in a 6 MHz channel, which is currently required to attenuate its out-of-band power to –97 dBW (as measured in a 100 kHz resolution bandwidth), an extremely difficult and potentially expensive level to achieve.

31. All parties commenting on them support the amendments sought by IPWireless. At the time the original out-of-band limitations were placed on all response stations, none of the parties to this rulemaking proceeding had discussed the use of response stations with such low power levels and the effects of these limitations on such stations. We agree with IPWireless that it would be unreasonable to require low power response stations to comply with emission limitations crafted for much higher power levels. For high power stations, the effects of out-of-band emissions can be very serious, in that significant amounts of harmful interference can result from these emissions when received by stations in neighboring MDS and ITFS systems. Such concerns are not significant, however, with respect to low power response stations because the amount of out-of-band power generated by such stations is very small. Therefore, we are amending Sections 21.908 and 74.936 of our Rules as requested by IPWireless.

32. Also with respect to low power MDS and ITFS response stations, IPWireless requested that the Commission amend its rules to incorporate into them certain provisions which were included in the *Reconsideration Order* in the form of a waiver of the rules. Specifically, referring to the blanket waiver in the *Reconsideration Order* of the requirement that low power response stations must use directional antennas,[21] IPWireless states that "...the Commission must assure fixed wireless subscribers that they have a clear and unequivocal legal right under the Commission's Rules to use an omnidirectional antenna in connection with any MDS/ITFS Response Station equipment they purchase at retail." IPWireless argues that a waiver does not convey the same level of certainty as a rule and that this lack of certainty could have adverse repercussions on the retail marketing and use of low power MDS/ITFS response stations. The current requirement for use of directional antennas at response stations is a carryover from past practice and is intended to help minimize interference from one MDS/ITFS system into another. All parties supported continuation of that requirement as part of the *Two-Way Order*. However, as with the out-of-band power limitation discussed above, no consideration was given at that time to the possibility that significant numbers of low power response stations might be utilized as an integral part of an MDS or ITFS two-way system.

33. The issue of the waiver was first raised by Qualcomm, which presented a type of low power response station which was small enough to easily be placed on a desktop or shelf and could be used as part of a very localized system of many such units, all communicating with a nearby hub station. The antenna for this unit is a very short 'whip' type metal rod, which is omnidirectional, *i.e.*, radiates and receives signals equally on all azimuthal headings. Qualcomm contended, and we agreed, that the use of such antennas at low power stations posed very little risk of interference to neighboring systems and should therefore be permitted. With respect to the impact of omnidirectional antennas on interference from neighboring systems, we conditioned our waiver of the rules by requiring that all interference calculations involving protection of low power/omnidirectional response stations be conducted as if those station were using a directional antenna for reception. This proviso was included so that the use of omnidirectional antennas for reception would not result in such stations receiving greater interference protection than that

[21] *Reconsideration Order*, 14 FCC Rcd at 12781.

provided to non-omnidirectional stations. Although we believe that our blanket waiver of the pertinent rules was sufficient to provide the relief sought by Qualcomm, we also believe that IPWireless has presented sufficient justification for amending our rules in order to codify our position on this matter. We are therefore amending Sections 21.906 and 74.937 of our Rules as requested by IPWireless.

34. In its petition, WCA requests amendment of Sections 21.909(g)(6) and 74.939(g)(6), arguing that there is an "apparent inconsistency" between these rules and the provisions of Rule Sections 21.909(a) and 74.939(a). In Sections 21.909(a) and 74.939(a), we gave licensees wide latitude to subdivide their 6 MHz channels into multiple channels of lesser width, *e.g.*, a single 6 MHz channel could be divided into 100 channels, each of which has a bandwidth of 60 kHz. This provision will allow licensees to optimize the bandwidths available within their systems and greatly enhance spectral efficiency. Sections 21.909(g)(6) and 74.939(g)(6) require that the number of response stations which transmit simultaneously within any particular region of a response service area ("RSA") conform to the numerical limits for each class of response station used for analyzing the potential for interference to neighboring systems. WCA argues that a conflict may exist between these two sets of Rule Sections because 21.909(g)(6) and 74.939(g)(6) "do not specifically provide for an adjustment in the number of simultaneously-operating response stations where the licensee exercises its right under 21.909(a) or 74.939(a) to subchannelize." WCA requests that the Commission therefore amend 21.909(g)(6) and 74.939(g)(6) to "make clear that when a licensee does subchannelize.... and limits the maximum EIRP emitted by any individual response station proportionately to the fraction of the channel that the response station occupies, the licensee may operate simultaneously on each subchannel the number of response stations specified in its initial interference analysis." CTN objects to WCA's proposal and argues that it should be rejected unless the Commission also adopts a rule amendment which requires that all of the subchannels of a 6 MHz channel remain within the same RSA as the 6 MHz channel. CTN argues that, absent this provision, multiple RSA's could be created by the subchannels which would increase the interference potential of the system beyond that permissible for the system if the 6 MHz channel were left undivided.

35. We agree with WCA that the rules should be amended to clarify the relationship between the provisions that permit subdivision of 6 MHz channels and the provisions that limit the number of response stations that may be operated. It was not our intent to impose a ceiling on the maximum number of permissible response stations within a 6 MHz channel that would limit the flexibility of licensees to create subchannels. In footnote 44 of the *Two-Way Order*, we explained how the power for a 6 MHz channel was to be subdivided when the channel was subdivided, and in Rule Sections 21.902 and 74.903 governing interference protection standards for two-way systems, we required that, for channels other than 6 MHz in width, a power spectral density adjustment be applied to the interference criteria in order to account for the actual bandwidth in use. Nevertheless, in light of the concern for clarity expressed by WCA, we are amending 21.909(g)(6) and 74.939(g)(6) to clearly state that the numerical limitations imposed on the response stations in a 6 MHz channel are subject to adjustment, without Commission approval, when the 6 MHz channel is subdivided, so long as the appropriate power flux density requirements are observed. With respect to CTN's position that such flexibility should be permissible only if the Commission also amends its rules to require that all subchannels be within the original 6 MHz RSA, we agree with WCA that such a requirement already exists and can be found in Rule Sections 21.909(g)(1) and 74.939(g)(1). The creation of an RSA without an application for, and approval of, a separate hub station license is not permitted by our Rules and we reject CTN's claim to the contrary.

36. CTN and WCA have suggested several editorial amendments and clarifications to Appendix D of the *Two-Way Order*, the Methodology for Predicting Interference from Response Station Transmitters and to Response Station Hubs and for Supplying Data on Response Station Systems ("Methodology"). We recently released a revised version of the Methodology, pursuant to the provisions of footnote 129 of the

Two-Way Order, which addresses all of the issues raised by these parties and we have also incorporated a number of clarifying amendments on our own motion.[22] The full text of the revised Methodology can be found at http://www.fcc.gov/mmb/vsd/files/methodology.doc. The Methodology is also attached as Appendix D to this order.

G. Other Matters

37. In addition to the rule changes discussed above, we have made some minor changes to our application filing and service rules. The data files required pursuant to Appendix D (as revised) of the *Two-Way Order* and the demonstrations and certifications required by our rules are to be filed with the Commission's Reference Room, rather than with the Commission's copy contractor. We will require that the Appendix D data files be in ASCII format on either CD-ROM or 3.5 inch diskette media. No hard copy version of these data files will be required. Demonstrations and certifications may be in either hard copy or ASCII or PDF format on CD-ROM or 3.5 inch diskette media. (If CD-ROM or 3.5 inch diskette media are used, no hard copy version is required.) Applicants serving the data files, demonstrations and certifications on other applicants and/or licensees will be required to do so using the same format(s) and media as used in their submissions to the Commission's Reference Room.

IV. FURTHER NOTICE OF PROPOSED RULEMAKING

38. In its Consolidated Comments and Partial Opposition, WCA raises a concern that there may be some uncertainty with respect to the proper interpretation of Rule Sections 21.909(m) and 74.939(o), in particular the meaning of a phrase common to those sections which states that "Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden." WCA asks that the Commission clarify the meaning of this language so that it requires that a response station's transmitter "must be biased off so that no RF Gaussian noise will be emitted when the station is not engaged in communications." WCA argues that this interpretation is needed in order to assure that "the noise floor of adjacent channel and adjacent market licensees is protected against unnecessary emissions from transceivers." In an *ex parte* filing, WCA proposed to set the permissible level of Gaussian noise at the following levels:

1) 10 microvolts/meter per 1 MHz bandwidth at a distance of 3 meters for response stations utilizing antennas with 6 dB or less gain over isotropic

2) 10 microvolts/meter x 10exp[(antenna gain – 6 dB) / 20] per 1 MHz bandwidth at a distance of 3 meters for stations utilizing antennas with more than 6 dB gain over isotropic

39. We agree with WCA that a clarification of this issue is needed, however, because of the importance and potential impact of such a clarification, we believe that all interested parties should be given an opportunity to submit comments and replies. We request that commenting parties address, at a minimum, the following issues:

1) Should we establish a numerical standard for the maximum permissible radiation level of a response station transmitter which is in the "off" state, i.e., when it is powered up but not in the act of transmitting a signal to the response hub?

[22] *See* Public Notice, Commission Amends Methodology Used for Calculation of Interference Protection and Data Submission for MDS and ITFS Station Applications for Two-Way Systems, DA-0093, released April 27, 2000.

2) If there should be a maximum off-state radiation level, what should that level be and how should it be defined? Should it be defined in terms of the transmitter power output into the antenna, or in terms of the radiated field strength? Should it be a function of antenna gain and/or antenna height?

3) To what extent, and how, should a maximum off-state radiation level take into account the number of response station transmitters likely to be active in a 2-way system? Should the off-state radiation levels for multiple transmitters be directly additive or are there alternative ways to apportion among the response stations the total amount of permissible off-state radiation from a 2-way system?

4) What degree of protection from off-state radiation should be afforded to neighboring systems? Should hub station receiver noise floors receive the same, more, or less protection from off-state radiation than from co- and adjacent channel interference as currently provided in the rules?

40. We also ask that parties include where possible an analysis of the relative costs and benefits of their proposals.

V. REGULATORY FLEXIBILITY ANALYSES

41. As required by the Regulatory Flexibility Act (RFA),[23] the Commission has prepared a Second Supplemental Final Regulatory Flexibility Analysis and an Initial Regulatory Flexibility Analysis of the possible significant economic impact on small entities by the rules, polices and proposed rulemaking adopted in this document. *See* Appendix B.

VI. PROCEDURAL MATTERS

A. *Ex Parte* Presentations

42. This is a permit-but-disclose notice-and-comment rulemaking proceeding. Ex parte presentations are permitted, except during the Sunshine Agenda period, provided that they are disclosed as provided in the Commission's rules. *See generally,* 47 C.F.R. §§ 1.1202, 1.1203, 1.1206. Written submissions, however, will be limited as discussed below.

[23] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq*., has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

B. Paperwork Reduction Act of 1995 Analysis

43. The action contained herein has been analyzed with respect to the Paperwork Reduction Act of 1995 and found to impose new or modified reporting and recordkeeping requirements or burdens on the public. Implementation of these new or modified reporting and recordkeeping requirements will be subject to approval by the Office of Management and Budget (OMB) as prescribed by the Act. The new or modified paper work requirement contained in this *Report and Order on Further Reconsideration* (which are subject to approval by OMB) will go into effect upon OMB approval.

C. Comment Filing Procedures

44. General Requirements. Pursuant to applicable procedures set forth in sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on the Further Notice of Proposed Rulemaking on or before August 21, 2000 and reply comments on or before August 31, 2000. Comments may be filed using the Commission's Electronic Comment Filing System ("ECFS") or by filing paper copies. *See* Electronic Filing of Documents in Rulemaking Proceedings, 13 FCC Rcd 11322, 11326 (1998). Comments filed through the ECFS can be sent as an electronic file via the Internet to http://www.fcc/e-file/ecfs.html. Generally, only one copy of an electronic submission must be filed. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form<your e-mail address>." A sample form and directions will be sent in reply. Or you may obtain a copy of the ASCII Electronic Transmittal Form (FORN-ET) at http://www.fcc.gov/efile/email.html.

45. Parties who choose to file by paper must file an original and four copies of each filing. All filings must be sent to the Commission’s Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 Twelfth Street, S.W., Rm. TW-A325, Washington, D.C. 20554, with a copy to David Roberts, Video Services Division, Mass Media Bureau, 445 Twelfth Street, S.W., Rm. 2-A728, Washington, D.C. 20554. One copy of all comments should also be sent to the Commission’s copy contractor. Copies of all filings are available for public inspection and copying during regular business hours at the FCC Reference Information Center, 445 12th Street, S.W., Washington, D.C. 20554.

46. Parties who choose to file by paper should also submit their comments on diskette. Parties should submit diskettes to Jonathan Levy, Office of Plans and Policy, 445 12th Street S.W., Room 7-C362, Washington, D.C. 20554. Such a submission should be on a 3.5 inch diskette formatted in an IBM compatible format using Word or compatible software. The diskette should be accompanied by a cover letter and should be submitted in “read only” mode. The diskette should be clearly labeled with the party's name, proceeding (including the docket number, MM Docket 97-217), type of pleading (comments or reply comments), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase "Disk Copy - Not an Original." Each diskette should contain only one party's pleadings, referable in a single electronic file. In addition, commenters must send diskette copies to the Commission’s Copy contractor, International Transcription Service, Inc., 1231 20th Street, N.W., Washington, D.C. 20037.

47. Other requirements. Comments and reply comments must include a short and concise summary of the substantive arguments raised in the pleading. Comments and reply comments must also comply with Section 1.49 and all other applicable sections of the Commissions rules.[24] We also direct all

[24] *See* 47 C.F.R. § 1.49. We require, however, that a summary be included with all comments and reply comments. The summary may be paginated separately from the rest of the pleading (*e.g.*, as "i, ii"). *See* 47 C.F.R. (continued….)

interested parties to include the name of the filing party and the date of the filing on each page of their comments and reply comments.

48. Additional Information. For additional information on this proceeding, contact David Roberts at (202) 418-1600, Video Services Division, Mass Media Bureau, 445 Twelfth Street, S.W., Room 2-A728, Washington, D.C. 20554.

VII. ORDERING CLAUSES

49. Accordingly, IT IS ORDERED that the above-referenced petitions for further reconsideration and/or clarification of the *Order* ARE GRANTED IN PART AND DENIED IN PART, as described above.

50. IT IS FURTHER ORDERED that, pursuant to the authority contained in Sections 4(i) and (j), 301, 303(f), 303(g), 303(h), 303(r), 308(b), 403, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 301, 303(f), 303(g), 303(h), 303(j), 308(b), 403, and 405, this *Report and Order on Further Reconsideration* is ADOPTED, the *Order* IS MODIFIED AND CLARIFIED to the extent specified above, and Parts 21 and 74 of the Commission's Rules, 47 C.F.R. §§ 21 and 74, ARE AMENDED, as set forth in the attached Appendix C.

51. IT IS FURTHER ORDERED that NOTICE IS HEREBY GIVEN and COMMENT IS SOUGHT on the proposed clarification described in the *Further Notice of Proposed Rulemaking* as set forth in paragraphs 38-40.

52. IT IS FURTHER ORDERED that the rule amendments set forth in Appendix C not pertaining to new or modified reporting or recordkeeping requirements WILL BECOME EFFECTIVE 60 days after their publication in the Federal Register.

53. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Operations, SHALL SEND a copy of this *Report and Order on Further Consideration and Further Notice of Proposed Rulemaking* including the Supplemental Final and Initial Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary

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§ 1.49.